



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (310) 699-7411, FAX: (310) 695-6139

CHARLES W. CARRY
Chief Engineer and General Manager

February 21, 1996
File No. 31R-10.11

Ms. Lauren Fondahl
U.S. EPA - Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Ms. Fondahl:

Annual Biosolids Monitoring Report
Joint Water Pollution Control Plant, NPDES No. CA0053813

Enclosed is the Annual Monitoring Report for 1995 as required under 40 CFR Part 503.

"I certify, under penalty of law, that the vector attraction reduction requirements in 503.33(b)(1) and the pathogen reduction requirements in 503.32(b)(3) were met for the entire year. These determinations have been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Should you have any questions or require additional information, please contact Penny Hill at (310) 699-7411, extension 2809.

Very truly yours,

Charles W. Carry

Robert W. Horvath
Assistant Department Head
Technical Services Department

RWH:PH
Enclosures

cc: Ghirelli, Los Angeles RWQCB
Crooks, Central Valley RWQCB
Long, Central Valley RWQCB

**COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
JOINT WATER POLLUTION CONTROL PLANT**

ANNUAL BIOSOLIDS MONITORING REPORT - 1995

GENERAL INFORMATION

Operator: County Sanitation Districts of Los Angeles County
Contact: Penny Hill
Address: 1955 Workman Mill Road, P.O. Box 4998, Whittier, CA 90607
Telephone: (310) 699-7411, extension 2809
Ownership Status: Publicly Owned Treatment Works

FACILITY INFORMATION

Name: Joint Water Pollution Control Plant (JWPCP)
Location: 24501 S. Figueroa Street, Carson, CA 90745
Telephone: (310) 830-2400
NPDES Number: CA0053813
Facility Capacity/Flow: 385 MGD/332 MGD

BIOSOLIDS INFORMATION

Treatment: Primary and thickened waste activated sludges were anaerobically digested at an average temperature of 96 degrees Fahrenheit and detention time of 24 days. Volatile solids destruction averaged 50% and digested biosolids were dewatered to approximately 26% total solids via scroll centrifuges. Dewatered biosolids were hauled to various reuse or disposal sites as summarized on page 3 and described on pages 4 - 7.

Quantities Generated: 454,070 wet tons = 3153 dry tons per day = 347 dry metric tons per day

Monitoring/Frequency: Monthly digester performance for Class B time/temperature criteria
Seven grab samples per month for fecal coliforms, Jan - Aug
Monthly 24-hour composite samples for Table 1/Table 3 metals
Bi-monthly 24-hour composite samples for California Title 22 STLC analysis
Semi-annual 24-hour composite samples for priority pollutants
Additional monitoring as shown in Attachment 1

Sample Type: Digested, dewatered biosolids

Quality: The PSRP criteria (time/temperature) for anaerobic digestion were met for the entire year, thus, the Class B pathogen reduction requirement was met per 503.32(b)(3). Additionally, seven samples per month were analyzed for fecal coliforms during the months January to August. The geometric mean densities of fecal coliforms were less than 2×10^6 MPN/gram dry weight for all months sampled except April, July and August. Results for the reporting period are shown on page 2.

No samples exceeded Table 1 metal concentrations. The Table 3 selenium concentration of 36 mg/kg was exceeded in two of ten monthly samples analyzed prior to the limit being changed to 100 mg/kg on October 25, 1995. No samples exceeded the Selenium limit of 100 mg/kg. Results for the reporting period are shown on page 2; additional metals data are presented in Attachment 1.

No free liquids and non-hazardous. Data are presented in Attachment 1.

JOINT WATER POLLUTION CONTROL PLANT

1995 DIGESTER PERFORMANCE				
Month	Detention Time (days)	Temperature (degrees F)	VSD (%)	Fecal Coliforms (MPN x 10 ⁶ /dry g)
Jan	21	95	49	1.35
Feb	20	95	53	1.47
Mar	21	95	49	1.14
Apr	23	96	51	2.26
May	25	96	51	1.32
Jun	24	96	51	1.05
Jul	25	96	50	6.07
Aug	23	96	49	4.43
Sep	26	96	50	-
Oct	26	96	49	-
Nov	25	96	49	-
Dec	25	96	52	-

1995 BIOSOLIDS CAKE - TABLE 1/TABLE 3 METALS CONCENTRATIONS										
	Mg/Kg Dry Weight									
	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn
Jan	9.56	11.1	157	450	69.6	2.57	29.7	102	34.1	965
Feb	10.3	12.8	162	434	85.2	2.2	22.9	108	27.8	975
Mar	11.0	16.5	143	486	85.0	2.06	30.4	121	32.4	938
Apr	12.7	13.7	165	470	94.3	2.13	27.0	104	29.8	1010
May	11.2	12.6	146	446	79.1	2.1	32.5	110	32.7	1010
Jun	11.2	11.2	181	422	73.7	2.31	26.2	106	33.0	945
Jul	9.16	10.4	142	432	77.5	2.15	31.6	101	37.0	830
Aug	9.06	10.3	165	441	79.7	2.36	27.7	104	33.8	1000
Sep	8.84	11.4	136	458	72.6	2.93	37.2	104	31.0	879
Oct	8.37	10.6	130	462	98.6	2.81	34.6	108	40.2	963
Nov	9.53	10.6	134	445	60.3	2.14	32.4	109	38.7	933
Dec	11.8	10.1	133	512	69.7	2.55	34.4	130	35.9	1030
Average	10.2	11.8	150	455	78.8	2.4	30.6	109	33.9	957
Maximum	12.7	16.5	181	512	98.6	2.93	37.2	130	40.2	1,030
Table 1	75	85	3000/- ¹	4300	840	57	75	420	100	7500
Table 3	41	39	1200/- ¹	1500	300	17	-	420	36/100 ¹	2800

¹ Tables 1 & 3 chromium limits were deleted and the Table 3 selenium limit was changed from 36 to 100 mg/kg on October 25, 1995.

JOINT WATER POLLUTION CONTROL PLANT

1995 BIOSOLIDS DISPOSAL/REUSE SUMMARY			
Operator	Type of Operation	Site	Wet Tons
Kellogg Supply, Inc. <i>hauling to Recyc site commenced 9/16/95</i>	Composting	Recyc, Inc. - Temescal Canyon Riverside County, CA	15,648
Recyc, Inc. <i>hauling ceased 9/15/95</i>	Composting	Temescal Canyon Riverside County, CA	20,779
Wheelebrator, Bio Gro Division <i>hailed 1/24/95 - 4/11/95</i>	Direct Land Application	Blythe Riverside County, CA	19,996
Ag Tech Company <i>hauling ceased 10/14/95; thereafter, standby only</i>	Direct Land Application	Ag Tech Yuma, AZ	33,178
Ag Tech Company	Direct Land Application	Tule Ranch Kern County, CA	39,761
Yakima Compost Company	Direct Land Application	Buttonwillow Land & Cattle Co. Kern County, CA	24,173
McCarthy Family Farms, Inc.	Direct Land Application	Liberty Farms Kings County, CA	119,526
McCarthy Family Farms, Inc. <i>hauling commenced 10/19/95</i>	NO _x Reduction	Mitsubishi Cement Corp. San Bernardino County, CA	5,849
Los Angeles County Sanitation Districts	Landfill Co-Disposal	Puente Hills Landfill Los Angeles County, CA	173,231
Los Angeles County Sanitation Districts	In-Vessel Compost Research	JWPCP Los Angeles County, CA	1,928

DISPOSAL/REUSE PRACTICES

Land Application

Contract Company: Kellogg Supply, Inc.
Contact: Kathy Kellogg Johnson
Address: 350 W. Sepulveda Boulevard, Carson, CA 90745
Telephone: (310) 830-2200
Site Location: Recyc, Inc. - Interstate 15 and Temescal Canyon Road
 81 acres, Section 26, T4S, R6W, Riverside County, CA

Reuse Process: Bulk & Bagged Land Applications of Derived Material via Composting

Contract Commenced: January 1, 1983
 Kellogg subcontract to Recyc for composting commenced September 16, 1995

Biosolids Quantity: 15,648 wet tons = 3,922 dry tons = 3,557 dry metric tons

Pathogen Reduction: Class B Biosolids
Achieved by PSRP (anaerobic digestion) [503.32(b)(3)]
Class A Compost Product
Produced by subcontractor

Vector Attr. Reduction: \geq 38% volatile solids reduction [503.33(b)(1)]

Contract Company: Recyc, Inc. until 10/15/95
Contact: Joe Oltman
Address: 114 Business Center Drive, Corona, CA 91720-1724
Telephone: (909) 371-3929
Site Location: Interstate 15 and Temescal Canyon Road
81 acres; Section 26, T4S, R6W, Riverside County, CA

Reuse Process: Bulk & Bagged Land Applications of Derived Material via Composting

CA Permits: Santa Ana Regional Water Quality Control Board
Waste Discharge Requirements No. 90--173, 12/7/90
California Integrated Waste Management Board
Solid Waste Facility Permit No. 33-AA-0225, 1/25/90
Riverside County
Conditional Use Permit No. 2999, 9/27/89

Contract Commenced: June 15, 1992 (discontinued September 15, 1995)

Biosolids Quantity: 20,779 wet tons = 5,238 dry tons = 4,751 dry metric tons

Pathogen Reduction: Class B Biosolids
Achieved by PSRP (anaerobic digestion) [503.32(b)(3)]
Class A Compost Product
Produced by contractor

Vector Attr. Reduction: \geq 38% volatile solids reduction [503.33(b)(1)]

Contract Company: Ag Tech Company
Contact: Kenny Evans
Address: 2450 South 4th Street, Suite 117
Telephone: (800) 498-6224
Site Location: Yuma, Arizona Site - County 21st and Avenue 1E
10,588 acres; T10S, R23W
Kern County, CA Site - Tule Ranches (Bakersfield Area)
1,359 acres; Sections 8-9, T25S, R23E & Sections 4,5,9, T25S, R24E

Reuse Process: Bulk Application to Agricultural Land

AZ/CA Permits: Arizona Department of Environmental Quality
Reference No. SW93-090
Central Valley Regional Water Quality Control Board
Waste Discharge Requirements No. 94-253, 9/16/94
General Waste Discharge Requirements No. 95-140, 5/26/95

Contract Commenced: February 17, 1993 with applications to the Yuma Site.
Discontinued use of Yuma 10/14/95 except as standby option
Kern Site applications commenced November 18, 1994

Biosolids Quantity: Yuma Site - 33,178 wet tons = 8,433 dry tons = 7,649 dry metric tons
Kern Site - 39,761 wet tons = 10,017 dry tons = 9,086 dry metric tons

Pathogen Reduction: Class B Biosolids
Achieved by PSRP (anaerobic digestion) [503.32(b)(3)]

Vector Attr. Reduction: $\geq 38\%$ volatile solids reduction [503.33(b)(1)]

Contract Company: Yakima Compost Company, Inc.
Contact: Jim Willett
Address: P.O. Box 1164, Edmonds, WA 98020-1164
Telephone: (800) 375-8343
Site Location: Buttonwillow Land and Cattle Company, Kern County, CA (Bakersfield Area)
5,804 acres; Sections 2 - 4, 11 - 14, 25, 33, 34, T28S, R23E; Sections 4, 5,
9, 15, 22, 23, 25, 29S, R24E; Sections 31, 32, T28S, R24E

Reuse Process: Bulk Application to Agricultural Land

CA Permit: Central Valley Regional Water Quality Control Board
Waste Discharge Requirements No. 94-012, 4/22/94
General Waste Discharge Requirements No. 95-140, 5/26/95
NOI #s 95-14004, 14005, 14006

Contract Commenced: November 29, 1994

Biosolids Quantity: 24,173 wet tons = 6,065 dry tons - 5,501 dry metric tons

Pathogen Reduction: Class B Biosolids
Achieved by PSRP (anaerobic digestion) [503.32(b)(3)]

Vector Attr. Reduction: $\geq 38\%$ volatile solids reduction [503.33(b)(1)]

Contract Company: McCarthy Family Farms, Inc.
Contract: Pat McCarthy
Address: 10095 Utica Avenue, P.O. Box 577, Corcoran, CA 93212
Telephone: (209) 992-5178
Site Location: Liberty Ranch, Kings County, CA (Corcoran Area)
17,522 acres; Sections 7-9, 13-36, T23S, R21E & Sections 5-8,
T23S, R223

Reuse Process: Bulk Application to Agricultural Land

CA Permits: Central Valley Regional Water Quality Control Board
Waste Discharge Requirements No. 94-215, 8/5/94

Contract Commenced: December 7, 1994

Biosolids Quantity: 119,526 wet tons = 28,537 dry tons = 25,883 dry metric tons

Pathogen Reduction: Class B Biosolids
Achieved by PSRP (anaerobic digestion) [503.32(b)(3)]

Vector Attr. Reduction: \geq 38% volatile solids reduction [503.33(b)(1)]

Contract Company: **Wheelebrator Clean Water Systems, Inc., Bio Gro Division** until 4/11/95
Contract: Jeff Thurber
Address: 19600 Fairchild, Suite 120, Irvine, CA 92715
Telephone: (714) 476-5080
Site Location: Various Sites - Riverside County, CA (Blythe Area)
RI8908 - Section 5, T8S, R22E, Section 36, T8S, R21E; Section 25, T8S, R21E
RI8 - Section 35, T2N, R22E; Section 36, T8S, R21E
RI9025 - Section 18, T6S, R22E
RI30 - Section 35, T7S, R23W

Reuse Process: Bulk Application to Agricultural Land

CA Permits: County of Riverside, Department of Health
Sludge Management Plan Approval, 5/22/91
Individual Application Site Approvals
California Regional Water Quality Control Board - Colorado River Basin Region
Order No. 90 - 018, 5/16/90

Contract Commenced: January 24, 1995 (discontinued April 11, 1995)

Biosolids Quantity: 19,996 wet tons = 5,142 dry tons = 4,664 dry metric tons

Pathogen Reduction: Class B Biosolids
Achieved by PSRP (anaerobic digestion) [503.32(b)(3)]

Vector Attr. Reduction: \geq 38% volatile solids reduction [503.33(b)(1)]

Biosolids Injection for NO_x Reduction during Cement Manufacturing

Contract Company: **McCarthy Family Farms, Inc.**
Contract: Pat McCarthy
Address: 10095 Utica Avenue, P.O. Box 577, Corcoran, CA 93212
Telephone: (209) 992-5178

Location: Mitsubishi Cement Corporation, 5808 State Highway 18, Lucern, CA

CA Permit: Mojave Desert Air Quality Management District
Permit To Operate No. B001025, 8/8/95

Biosolids Quantity: 5,850 wet tons = 1,472 dry tons = 1,335 dry metric tons

Co-disposal with Municipal Solid Waste

Owner/Operator: County Sanitation Districts of Los Angeles County
Contact: Penny Hill
Address: LACSD, 1955 Workman Mill Rd., P.O. Box 4998, Whittier, CA 90607
Telephone: (310) 699-7411, extension 2809

Location: Puente Hills Landfill, 2800 S. Workman Mill Rd., Whittier, CA 90601

CA Permits: California Integrated Waste Management Board
Solid Waste Facility Permit No. 19-AA-0053, 1/4/95
Los Angeles Regional Water Quality Control Board
Waste Discharge Requirements No. 90-046, 11/15/93
Los Angeles County
Conditional Use Permit No. 92-250-4, 8/30/94

Biosolids Quantity: 173,231 wet tons = 43,844 dry tons = 39,768 dry metric tons

Monitoring/Frequency: Semi-annual Paint Filter Test
Bi-monthly California Title 22 STLC, in accordance with Waste Discharge
Requirements No. 90-046
Results included in Attachment I

Research Project**In-Vessel Composter Demonstration Pilot Plant**

Owner/Operator: Los Angeles County Sanitation Districts
Contact: Penny Hill
Address: LACSD, 1955 Workman Mill Rd., P.O. Box 4998, Whittier, CA 90607
Telephone: (310) 699-7411, extension 2809
Site Location: Joint Water Pollution Control Plant, 24501 S. Figueroa Street
Carson, CA 90745

Operation: The composter is a "Tunnel Reactor"® combined with a Districts' patented air pollution control system. The capacity is 2.5 dry tons per day at 28 days detention time. Operations commenced in July, 1992.

The unit was in limited operation during January through March, 1995 due to a lack of in-feed mixing capabilities. The average detention time for the time period April - December when the unit was operating in a more typical mode was approximately 41 days.

Reuse Process: Bulk & Bagged Land Applications of Derived Material via Composting

CA Permits: South Coast Air Quality Management District
Permit to Construct & Operate Nos. 229180 & 246012, Revised 1994 & 1995
County of Los Angeles, Department of Health Services, Local Enforcement
Agency Enforcement Agency Notification, 1/4/96

Biosolids Quantity: 1,928 wet tons = 521 dry tons = 473 dry metric tons

Pathogen Reduction: Class B Biosolids
Achieved by PSRP (anaerobic digestion) [503.32(b)(3)]

Class A Compost Product
Demonstrated by Alternative 1 [503.32(a)(3) (i) & (ii)(A)]
Distributed by Kellogg Supply, Inc.

Vector Attr. Reduction: $\geq 38\%$ volatile solids reduction [503.33(b)(1)]

Monitoring/Frequency: Three grab samples for Salmonella; no sample for first quarter when unit was in limited operation
Four grab samples for Table 1/Table 3 metals; not taken on a quarterly basis, quarterly monitoring instituted in 1996.

Sample Type: Composted biosolids

Quality: The compost metals are below the Table 3 concentrations and Salmonella densities demonstrate Class A pathogen reduction. Results for the reporting period are shown below.

The composter has seven temperature monitoring zones. The average temperatures, in degrees Centigrade, within each of the zones were as follows: Zone 1 - 60, Zone 2 - 72, Zone 3 - 55, Zone 4 - 58, Zone 5 - 57, Zone 6 - 57, Zone 7 - 55.

JOINT WATER POLLUTION CONTROL PLANT - IN-VESSEL COMPOST

1995 COMPOSTED BIOSOLIDS - TABLE 1/TABLE 3 METALS CONCENTRATIONS						
	Mg/Kg Dry Weight					
	3/2/95	5/10/95	6/7/95	7/28/95	Table 1	Table 3
As	12.4	2.9	11.7	13.1	75	41
Cd	15.1	7.9	11.5	12.2	85	39
Cr	62.4	43.6	57.9	70.6	3000/- ¹	1200/- ¹
Cu	239	152	199	198	4300	1500
Pb	42.7	18.0	43.9	72.0	840	300
Hg	<0.30	<0.15	<0.15	<0.15	57	17
Mo	25.0	7.9	13.6	16.4	75	-
Ni	49.1	36.6	43.2	48.7	420.0	420
Se	7.5	<2.5	24.4	23.9	100	36/100 ¹
Zn	542	351	434	946	7500.0	2800

¹ Tables 1 & 3 chromium limits were deleted and the Table 3 selenium limit was changed from 36 to 100 mg/kg on October 25, 1995.

1995 COMPOSTED BIOSOLIDS - SALMONELLA CONCENTRATIONS			
	4/17/95	7/19/95	10/31/95
Salmonella MPN/4 dry grams	<1.5	<1.6	<1.5

ATTACHMENT I

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
JOINT WATER POLLUTION CONTROL PLANT

MONITORING PROGRAM

METALS
DETECTED ORGANICS
NUTRIENTS AND MISCELLANEOUS CONSTITUENTS

1995 BIOSOLIDS MANAGEMENT PROGRAM
JWPCP Biosolids Cake -Total Metals Concentrations
Mg/Kg Dry Weight

Sample Number	Date	% TS	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	Al
JW20041	1/4/95	23.0	9.56	11.1	157	450	69.6	2.57	29.7	102	34.1	965	-
JW20472	2/6/95	27.0	10.3	12.8	162	434	85.2	2.24	22.9	108	27.8	975	17300
JW20921	3/7/95	26.2	11.0	16.5	143	486	85.0	2.06	30.4	121	32.4	938	-
JW21205	4/4/95	25.7	12.7	13.7	165	470	94.3	2.13	27.0	104	29.8	1010	19600
JW21542	5/1/95	26.0	11.2	12.6	146	446	79.1	2.1	32.5	110	32.7	1010	-
JW21960	6/6/95	26.4	11.2	11.2	181	422	73.7	2.31	26.2	106	33.0	945	16700
JW22345	7/11/95	24.8	9.16	10.4	142	432	77.5	2.15	31.6	101	37.0	830	-
JW22725	8/8/95	26.1	9.06	10.3	165	441	79.7	2.36	27.7	104	33.8	1000	14700
JW23068	9/5/95	25.3	8.84	11.4	136	458	72.6	2.93	37.2	104	31.0	879	-
JW23426	10/3/95	25.8	8.37	10.6	130	462	98.6	2.81	34.6	108	40.2	963	13800
JW23742	11/2/95	25.7	9.53	10.6	134	445	60.3	2.14	32.4	109	38.7	933	-
JW24373	12/5/95	26.6	11.8	10.1	133	512	69.7	2.55	34.4	130	35.9	1030	15000
MEAN		25.7	10.2	11.8	150	455	78.8	2.4	30.6	109	33.9	957	16200
MAX		27.0	12.7	16.5	181	512	98.6	2.93	37.2	130	40.2	1030	19600
TABLE 1 LIMITS		\	75	85	3000	4300	840	57	75	420	100	7500	\
TABLE 3 LIMITS		\	41	39	1200	1500	300	17	\	420	36	2800	\

Sample Number	Date	% TS	Sb	Ba	Be	Co	Fe	Mn	K	Ag	Tl	Sn	V
JW20041	1/4/95	23.0	-	-	-	-	-	-	-	-	-	-	-
JW20472	2/6/95	27.0	4.19	1230	0.35	15.6	54700	196	1570	31.8	<0.3	207	41.6
JW20921	3/7/95	26.2	5.08	-	-	-	-	-	-	-	-	-	-
JW21205	4/4/95	25.7	5.57	1240	0.48	15.8	61900	-	1310	33.7	<0.3	147	51.4
JW21542	5/1/95	26.0	-	-	-	-	-	-	-	-	-	-	-
JW21960	6/6/95	26.4	6.16	1320	0.28	17.5	63400	-	1340	34.8	<0.3	122	64.1
JW22345	7/11/95	24.8	-	-	-	-	-	-	-	-	-	-	-
JW22725	8/8/95	26.1	4.55	1110	0.28	15.5	72000	158	1110	31.8	<0.3	104	81.3
JW23068	9/5/95	25.3	-	-	-	-	-	-	-	-	-	-	-
JW23426	10/3/95	25.8	5.73	1220	0.28	15.4	61600	-	1120	30.3	<0.3	135	46.0
JW23742	11/2/95	25.7	-	-	-	-	-	-	-	-	-	-	-
JW24373	12/5/95	26.6	5.77	1290	0.37	15.2	61200	-	1080	30.3	<0.3	147	69.0
MEAN		25.7	5.29	1240	0.34	15.8	62500	177	1255	32.1	ND	144	58.9
MAX		27.0	6.16	1320	0.48	17.5	72000	196	1570	34.8	<0.3	207	81.3

- Sample not analyzed for constituent

\ No limit

1995 BIOSOLIDS MANAGEMENT PROGRAM

JWPCP Biosolids Cake - Nutrients and Miscellaneous Constituents Mg/Kg Dry Weight (or as indicated)

Sample Number	Date	% TS	Sulfur	PO4-P	NH3-N	Org-N	NO3-N	NO2-N	Paint	
									Total Cyanide	FilterTest (ml/100 g)
JW20041	1/4/95	23.0	-	-	5,260	41,900	<4	<0.4	-	-
JW20472	2/6/95	27.0	22,000	20,500	5,300	38,700	<4	<0.4	7.30	<1
JW20921	3/7/95	26.2	-	-	5,420	40,100	<4	0.5	-	-
JW21205	4/4/95	25.7	31,400	20,500	7,160	36,600	<4	0.5	-	-
JW21542	5/1/95	26.0	-	-	6,350	38,300	<77 +	<8 +	-	-
JW21960	6/6/95	26.4	31,300	20,900	5,270	37,900	<76+	8+	-	-
JW22345	7/11/95	24.8	-	-	5,770	37,900	<81+	<8+	-	-
JW22725	8/8/95	26.1	35,100	18,500	5,210	37,300	<77+	8+	4.10	<1
JW23068	9/5/95	25.3	-	-	4,660	36,800	<79+	10+	-	-
JW23426	10/3/95	25.8	32,400	16,800	4,690	37,000	<78+	<8+	-	-
JW23742	11/2/95	25.7	-	-	4,790	37,400	<78+	<8+	-	-
JW24373	12/5/95	26.6	31,400	18,100	5,000	38,700	<75+	19+	-	-
MEAN		25.7	30,600	19,200	5410	38,200	ND	<6.6	5.7	ND
MAX		27.0	35,100	20,900	7160	41,900	<81	19	7.30	<1

JWPCP Biosolids Cake - Detected Priority Pollutants Mg/Kg Dry Weight

Constituent	Date	2/5/95	8/8/95
	Sample Number	JW20472	JW22725
Total Solids (%)		27.0	26.1
OP' - DDE		0.017	0.0006
PP' - DDE		0.071	0.0051
OP' - DDD		0.034	0.002
PP' - DDD		0.048	0.0023
Alpha-BHC		0.0093	ND
Dieldrin		0.024	0.0008
Aroclor 1242		0.48	ND
Aroclor 1254		0.17	ND
Delta-BHC		0.0071	ND
Technical Chlordane		0.18	0.013
Total Detected Pesticides		1.04	0.024
P-Dichlorobenzene		0.045	ND
Toluene		0.025	ND
Ethyl Benzene		0.026	ND
Diethylhexyl Phthalate		21	27
Di-N-Octyl Phthalate		ND	2

ND - Not Detected

1995 BIOSOLIDS MANAGEMENT PROGRAM
JWPCP Biosolids Cake - Soluble Metals Concentrations - Mg/L
Analyzed by California Title 22 Waste Extraction Test

Sample Number	Date	Al	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Fe
JW20473	2/6/95	304	0.037	0.096	19.2	<0.08	<0.2	2.5	<0.4	<0.2	1220
JW21206	4/4/95	332	0.031	0.043	22.5	<0.08	<0.2	2.91	<0.4	<0.2	1290
JW21961	6/6/95	320	0.0543	0.129	21.2	<0.1	<0.2	2.8	<0.4	<0.2	1400
JW22726	8/8/95	283	0.044	0.165	21.1	<0.1	<0.2	2.4	<0.4	<0.2	1510
JW23427	10/3/95	254	0.043	0.097	19.3	<0.1	<0.2	1.9	<0.4	0.3	1380
JW24374	12/5/95	298	0.046	0.117	23.8	<0.1	<0.2	1.9	<0.4	<0.2	1500
MEAN		299	0.043	0.108	21.2	ND	ND	2.4	ND	ND	1380
MAX		332	0.0543	0.165	23.8	<0.1	<0.2	2.91	<0.4	0.3	1510
TITLE 22 STLCs		\	15	5.0	100	0.75	1.0	5	80	25	\

Sample Number	Date	Pb	Hg	Mo	Ni	K	Se	Ag	Tl	Sn	V	Zn
JW20473	2/6/95	<0.4	<0.0004	<0.4	1.9	16.0	<0.025	<0.5	<0.012	<1.0	<1.0	9.3
JW21206	4/4/95	<0.4	0.0014	<0.4	0.8	15.2	0.031	<0.2	<0.02	<1.2	0.9	6.8
JW21961	6/6/95	<0.4	<0.0004	<0.4	1.8	15.0	0.0228	<0.5	<0.02	<1.0	1.0	9.9
JW22726	8/8/95	<0.4	0.0027	0.4	1.8	11.1	<0.025	<1.0	<0.02	<1.2	1.0	11.0
JW23427	10/3/95	<0.4	<0.0004	<0.4	0.9	7.7	0.0448	<1.0	<0.02	<1.2	0.8	8.0
JW24374	12/5/95	<0.4	<0.0004	<0.4	2.2	15.8	0.0538	<0.2	<0.02	<1.2	1.2	8.6
MEAN		ND	<0.001	<0.4	1.6	13.5	<0.03	ND	ND	ND	<0.98	8.9
MAX		<0.4	0.0027	0.4	2.2	16.0	0.054	<1.0	<0.02	<1.2	1.2	11
TITLE 22 STLCs		5.0	0.2	350	20	\	1.0	5	7.0	\	24	250

\ No limit